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PROBLEM: DO BIRDS MATE FOR LIFE?

By J. EUGENE LAW

WITH ONE PHOTO BY L. E. WYMAN

THE excellent article entitled "Evidence that many birds remain mated for life", by F. C. Willard (*CONDOR*, xx, 1918, p. 167), is pregnant with problems for the bird ecologist. Another angle of view may further emphasize the value of intensive study, such as Mr. Willard's article indicates, and the necessity of carefully recording in the minutest detail every incident in a bird's life history.

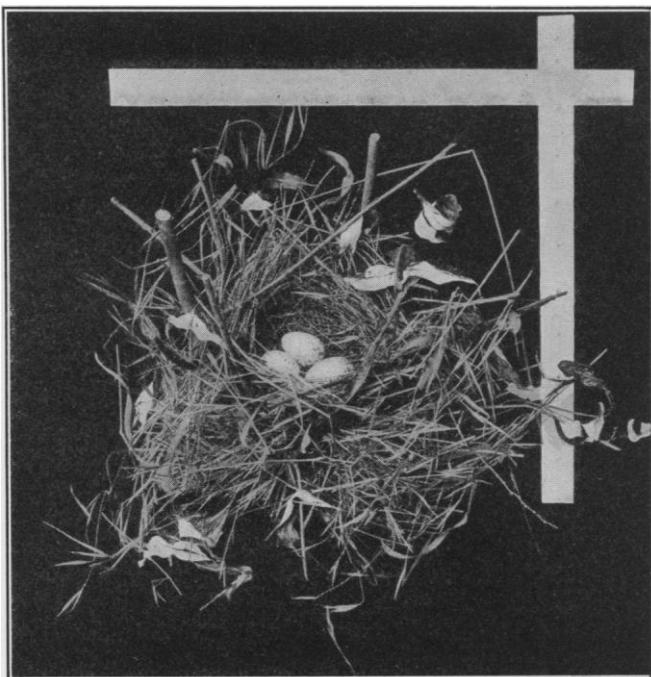


Fig. 10. NEST OF CALIFORNIA BLACK-HEADED GROSBEAK CONSTRUCTED MAINLY OF WILD OATS. THE EGGS SHOWN ARE BORROWED, AS THE TWO EGGS ORIGINALLY FOUND HAD BEEN DESTROYED WHEN THE NEST WAS NEXT VISITED. THE STRIPS AT TOP AND RIGHT ARE EACH ELEVEN INCHES LONG.

Photo by L. E. Wyman.

The precariousness of life among birds leads one, even though paired birds normally remained so, to doubt so uniform an escape from fatality as would follow, did the numerous incidents noted cover pairs mated throughout the period of Mr. Willard's observations. If lost mates were replaced, no doubt the surviving mate drew the new one to the old home of the survivor¹. Male hummingbirds are notoriously indifferent to any family relations, further than the actual act of fertilization. The Anna Hummingbird is pugnaciously solitary

¹The writer has had two pairs of Anthony Towhees about his acre-plot home for five years. These birds seemed beyond question to be paired throughout the year and consequently for life. At least twice during that time one of these four individuals was killed in a mouse trap, soon to be replaced by a new mate.

between nesting periods, although it, like the Blue-throated, returns to the same nest twig in successive seasons.

But even if a mate were replaced, might not the individual nesting characteristics be preserved? Does it not seem probable that a female bird normally returns to her bridal-nest locality throughout her life time, even though she habitually forms a new partnership with each successive nesting season? Uniformity in number of eggs, shape of eggs, shade of ground color, style of markings, kind of spot chosen for nest, individual taste in nest construction, could all be satisfied on this hypothesis. Possibly the death of the female would end the series, doubtless so in regard to egg characters and in species where the female alone builds the nest, but might not the surviving male often bring his new mate to the old home, particularly if she had not nested before? How much "my former mate did it this way" talk would avail is, of course, problematical, but an incident related to the writer by Major Allan Brooks indicates a certain tendency along that line. A female Cooper Hawk had been shot from her nest of eggs. Some days later another female, in adult plumage, was found incubating the same eggs, and was likewise shot. What was his surprise later to find a third female occupying the nest, this time a bird in the streaked plumage of a sub-adult. And as a matter of curiosity she was allowed to, and did, raise the brood.

Environment must exert an important influence on the nest. This would include availability and abundance of nest material normally acceptable within reasonable gathering distance, and, as well, the nature of adaptable sites in the neighborhood chosen for the nest. For while an adaptable site is no doubt the primary requisite to location, in the final analysis food and climatic conditions must be the determining factor, or at least the delimiting factor; and, since in many species each pair occupies its nest vicinity to the exclusion of all others of its kind, abundant population of such species would soon exhaust normal available localities where such localities were limited, and thus crowd some pairs into "unusual sites".

Then, given absence of usual nest material, or of usual nest site, or presence of attractive but unusual nest material in the locality selected, might not successive different nest builders readily display "unusual nest" characters sufficiently similar to suggest the same artist, and deceive even the most careful observer?

A striking example of environmental influence which came to the writer's attention is worth recording, though unfortunately no further data were obtained in subsequent years. A Black-headed Grosbeak, whose normal nest does not differ materially from that of the Rose-breasted, chose a rather open willow thicket some distance from other woods, and in the midst of a field of rank, green, growing wild oats, which also covered the floor of the thicket. The nest was made almost entirely of stalks including heads of the wild oat, still green, and so carelessly put together that the projecting bents and ends made a mass as big as a hat. (See fig. 10.)

It would be interesting to record how many successive seasons individually distinguishable sets and nests were found. Collecting a male here, a female there, and both parents in another place with the characteristic nest, and noting the effect on later nests, sets, and locations, would be of great value, and mating characteristics of families, perhaps of species, thus be worked out. Truly, Mr. Willard has opened up a most fertile field.

Los Angeles, California, November 1, 1918.